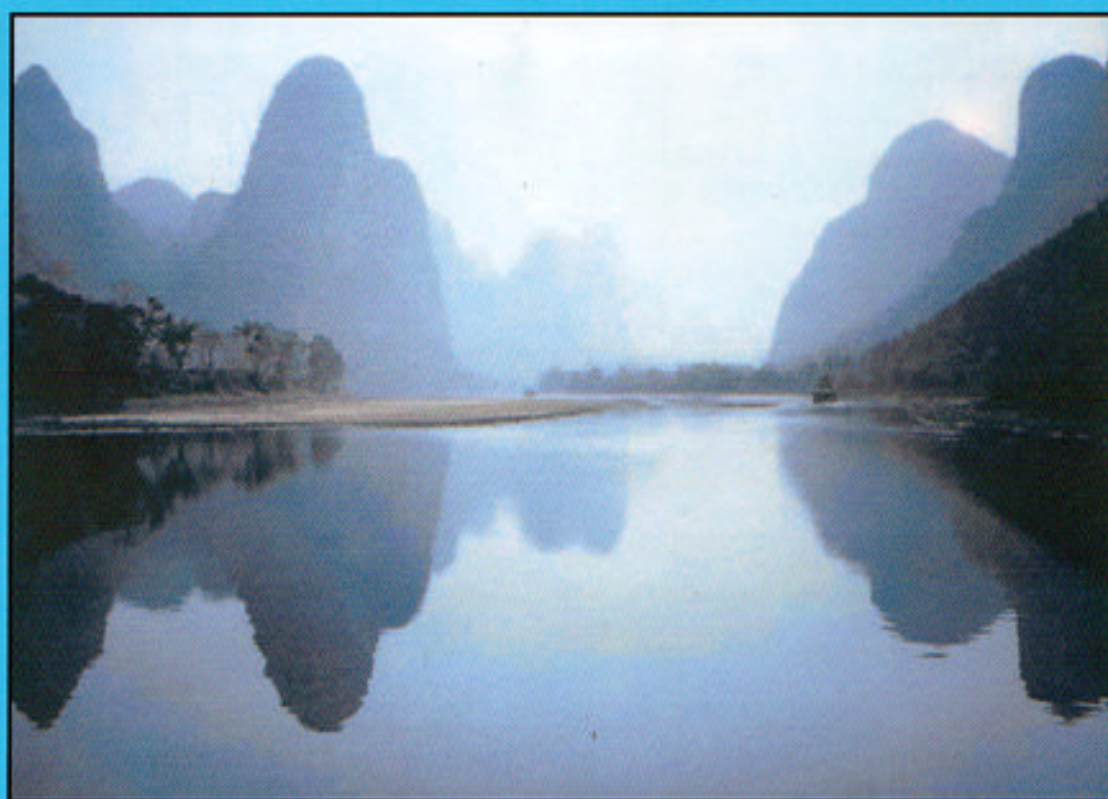




**United Nations Development Programme  
South East Asia HIV and Development Project**

**ASSESSING POPULATION MOBILITY AND HIV VULNERABILITY  
GUANGXI, PEOPLE'S REPUBLIC OF CHINA**



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**Prepared by: Guangxi Centre for HIV/AIDS Prevention and Control**

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**September 2001**

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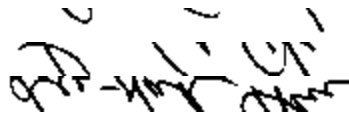
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## FOREWORD

Market economy and development in the past two decades have significantly impacted society and the lives of people living in China. The same forces have stimulated massive rural to urban population movements in recent years. Relaxed travel restrictions, increased rural unemployment and improved transportation have accelerated population movement. Drug abuses, sex work and sexually transmitted infections, including HIV, have emerged.

The UNDP-SEAHIV and Development project assists governments and policy makers with decision-support knowledge and an understanding of the linkages between development, population movement and HIV vulnerabilities. The Guangxi assessment is part of the regional effort, supported by UNDP-SEAHIV, to identify mobility-related HIV vulnerability along major transportation routes connecting Guangxi and Viet Nam. This report provides new insights into HIV vulnerabilities along major transport routes and communities. There is a need for advocacy of appropriate interventions for mobile populations and the communities they come in contact with. This assessment may serve to stimulate similar assessment for other provinces in China.

The assessment is accomplished by the Guangxi Provincial AIDS Office in collaboration with local communities and with technical and financial support from UNDP-SEAHIV and partial financial support from UNAIDS-SEAPICT.



*LEE-NAH HSU*

*Manager*

*UNDP South East Asia HIV and Development Project*

## **ACKNOWLEDGEMENT**

There is an unprecedented tide of rural workers moving outward from Guangxi, either temporarily or permanently. This population mobility is not only a response to economic reform, but also a consequence. Managing it is an indispensable component of the government development strategy. The large-scale population mobility is propitious for a balanced interregional development; re-distribution of the surplus labour force between urban and rural communities. It has benefited rural residents, especially the poor. Large-scale population movement influenced the economy, community development and society as a whole and the HIV epidemic.

It is our sincere hope that Guangxi will continue to collaborate with UNDP in development work to reduce its HIV vulnerability.

We are grateful for Dr. Lee Nah Hsu of the UNDP South East Asia HIV and Development Project for giving us the opportunity to assess the HIV vulnerabilities for the first time from the point of view of population mobility. Also, we thank her for financial support and technical assistance with our work and the publication of this report. This work now enables us to use a new approach to respond more appropriately and effectively to HIV/AIDS.

***WEI LIU***

***Guangxi Centre for HIV/AIDS Prevention and Control***

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# I. OVERVIEW OF GUANGXI PROVINCE

## 1. Introduction

Guangxi is located in Southern China bordering Beibuwan Gulf, the provinces of Guangdong, Hunan, Guizhou and Yunnan. It covers an area of 236,000 square kilometres and shares a land border with Viet Nam.



Map 1: Guangxi

### *Population*

The total population of Guangxi is 46.8 million: 24 million males and 22 million females, with a male/female ratio of 109/100. People between the ages of 0-14 years and over 65 years account for 27 per cent and 7.5 per cent of the population, respectively. The median age is 27.7 years.

### *Transport system*

By 1999, an extensive transportation network was established in Guangxi. There are 51,100 kilometres of highway. The main highways circling Nanning, the capital city, are Pingxiang-Nanning, Baise-Nanning, Guilin-Liuzhou-Nanning, Beihai (Fangchenggang)-Qinzhou-Nanning and Wuzhou (Yulin)-Nanning. This network connects Guangxi with the neighbouring provinces of Yunnan, Guangdong, Guizhou and Hunan, and with Viet Nam. There are 126,000 operational vehicles in Guangxi, including 26,000 buses with 500,500 seats and 100,000 trucks. As many as 10 million people are directly or indirectly involved in the transportation sector of Guangxi.

The railway network in Guangxi serves as a hub for Southern China with an international railway line linking China and Viet Nam. The main routes are (a) the Viet Nam-Nanning-Liuzhou-Guilin-Beijing-Moscow line, (b) the Nanning-Kunming line for the Yunnan-Guizhou- Baise-Nanning-Beihai line, and (c) the west line for Nanning-Yulin-Guangzhou or Zhanjiang.

Guangxi has 45 major inland waterways totalling 5,581 kilometres. These waterways are used for long-distance navigation with three seaports at Beihai, Fangchenggang and Qinzhou. The average annual passenger and freight volumes at the ports are 3.2 million and 2.2 billion million tons, respectively.

Guangxi is well served by air transportation. There are five airports, including two international airports at Nanning and Guilin, with services to 34 cities including Hong Kong, Macau, Bangkok, and Hanoi.

***Rapid socio-economic changes***

Backed by liberal economic policies, capital investment and open market forces, Guangxi experienced rapid economic growth and development between 1978 and 1990. Its economic growth peaked at 19 per cent in the Eighth Five Year Plan period and then slowed down to an average of 11 per cent during the Ninth Five Year Plan. Economic growth, improved transportation, industrialization and infrastructure development have opened up many opportunities for trade, employment and income. These developments and growth have most benefited those who were living in major urban areas while the rural majority lagged behind. As one of the consequences, Guangxi witnessed growing socio-economic imbalance between its rural and urban population.

***Widening rural vs. urban gaps in income and living standards***

The average annual per capita income for urban dwellers increased from 185 yuan in 1957 to 289 yuan in 1978 (56 per cent). In its second economic growth phase after 1978, the annual average income for urban dwellers in Guangxi rose to 4,494 yuan per capita in 1997, more than a 1400 per cent increase from that of 1978. In 1998, the average annual per capita income of urban dwellers was 5,412 yuan while that of the rural farmers was 1,972 yuan per capita, resulting in a large gap in both income and living standards between Guangxi urban and rural populations.

**Table 1: Changes in rural vs. urban per capita average annual income, 1957-1997**

<i>Year</i>	<i>1957</i>	<i>1978</i>	<i>1997</i>	<i>Percentage change (1957-1978)</i>	<i>Percentage change (1978-1997)</i>
Urban	185 Yuan	285 Yuan	> 4,494 Yuan	56	1,455
Rural	59 Yuan	120 Yuan	>1,000 Yuan	103	733

In rural Guangxi, farmers' lives changed more slowly during the 1980's. The average annual net income of farmers was 120 yuan per capita in 1978. In 1997, 84 per cent of farmers' average annual net income rose to over 1,000 yuan per capita.

According to the official definition, there were 2.6 million rural people below the poverty line in 1998. Due to increased unemployment in recent years, the income gap between the rich and poor in cities has also widened. In 1978 the income gap between the rural and urban dwellers was 165 yuan. By 1997, while the rural farmers had a 733 per cent increase in their annual income, the urban dwellers had 1,400 per cent increase during the same period. There is a parallel-widening gap in the level of government services including health, sanitation, water, telecommunication, social security, welfare and employment creation between the rural and urban areas.

The government has been implementing many policies, measures and programmes to reduce the gap between the rich and poor. For example, it has been raising funds through lotteries to finance social and welfare programmes; levying income taxes; and stimulating economic growth, employment and income generation. However, both the Guangxi Provincial government and the Central government are finding it difficult to bridge the income gaps between the urban rich and poor as well as between urban and rural communities, particularly in the area of social security, community and welfare services.

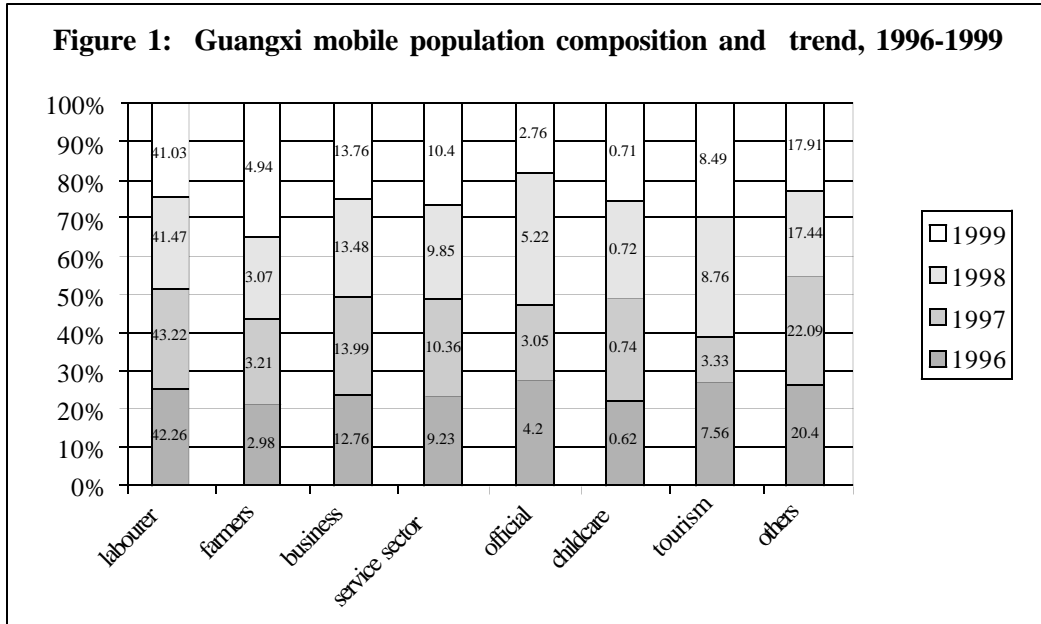
### ***Health services***

As of 1998, there were 479 hospitals, 1,312 township health centres, 33 specialist clinics, eight sanatoriums and 11,000 clinics. There are 123,800 health professionals in Guangxi. An average of 24.6 million patients per year receive diagnostic and treatment services from this network of health facilities. In a given year, an average of 500,000 patients are hospitalized. There are a total of 115 anti-epidemic stations in Guangxi for prevention and control of infections, health supervision and surveillance activities as well as for the implementation of an expanded programme on immunization (EPI).

Because of its geographic location, Guangxi has historically been a hub for trade, commerce, transportation and travel in southwest China. Cross-border trade and travel between Viet Nam and China have also been increasing in recent years. The rapid economic growth and development over the past two decades in Southwest China and between China and Viet Nam have made Guangxi all the more important as a hub. Its seaports serve the provinces in Southwest China. An elaborate network of roadways connects all the communities, municipalities, prefectures and counties while inter-provincial highways connect Guangxi with neighbouring provinces and the rest of China and Viet Nam. This vast network of land, inland water, sea and air transportation systems promotes high volume movement of goods and people. Special economic zones in Guangxi and Guangdong have created a demand for labourers resulting in a high rate of rural to urban migration. With the easing of travel restrictions, more people are moving in and out of Guangxi. Increased cross-border trade and travel with Viet Nam and inter-provincial trade have also increased the movement of traders, transportation workers and visitors into and out of Guangxi.

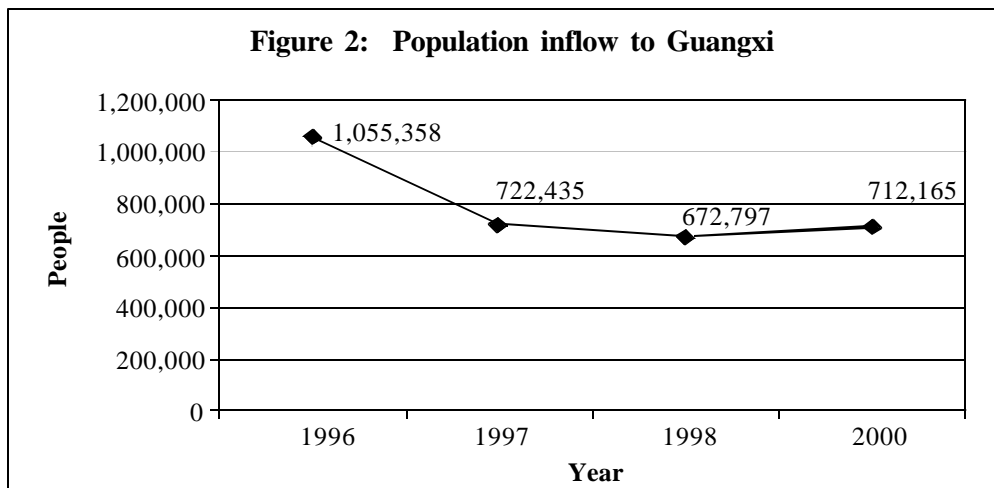
## 2. Population Mobility

An analysis of the 1996 to 1999 mobile population in Guangxi by occupation is presented in Figure 1. The analysis is based on tourist data from Staying Certificates provided by the Guangxi Public Security Department, from the Guangxi Tourist Department and from the Customs and Frontier Police's entry/exit data for China-Viet Nam border crossings.



As illustrated in Figure 1, from 1996 to 1999, nearly 42 per cent of the mobile population were labourers, 13.5 per cent businessmen, 10 per cent from the service sector, 7 per cent tourists, 3 per cent officials on duty travel, less than 1 per cent childcare workers and the remainder are unspecified.

The registered in-flow of population to Guangxi has slowed down by over 32 per cent between 1996 and 2000. Refer to Figure 2 for specific numbers reflecting this trend.



### *Source communities*

As shown in Table 2, more than two-thirds of population movement (68 per cent) were within Guangxi and the remainder from outside of Guangxi province.

**Table 2: Source of population movement**

	<i>Percentage of Migrant</i>	
	<i>From Guangxi</i>	<i>From other provinces</i>
Country level	56	20
City level	12	10

### *Employment categories of the mobile population*

In terms of occupation at the county level among the mobile populations in 1999, 45 per cent were in industry, 13 per cent in trade and businesses, 10 per cent in service sector, 10 per cent in training, and 7 per cent in agriculture. The occupational distribution is similar to national statistics. Concerning their employment preferences, migrant workers specified the following sectors in order of preference: tourism, industry, businesses and service sectors.

In recent years, the number of migrants involved in business, service and in training have increased while the number in farming decreased. These changes, in both composition and employment sectors of the mobile population, correspond to the broader changes within the Chinese economy from agrarian subsistence to industrial manufacturing.

### *Length of stay*

Analysing the length of stay of mobile populations in any one place between 1996 and 1999, the majority of them (two-thirds) stayed in one place for up to 12 months. One-third were highly mobile and stayed in any one place for less than a month. The remaining one-third stayed in one place for more than a year. Those staying more than one year were engaged in tourism (36 per cent), industry (20 per cent), business/ trading (17 per cent) and medical treatment (8 per cent).

### *Housing*

Most of the mobile population working in industry are housed in dormitories, hotels and rooming houses. The living conditions are basic. Overcrowding is common and sanitary facilities are poor thus conducive to disease transmission. Employers find it difficult to provide adequate on-site housing for large number of workers.

### *Destination of mobile population in 1999*

According to official sources, over 60 per cent of the mobile people in Guangxi were concentrated in three major urban centres and 20 per cent in three prefectures. Table 3 shows distribution of mobile population by destinations and sectors of employment in Guangxi.

**Table 3: Distribution of mobile population in Guangxi by destination and sector of employment**

<i>Destination</i>	<i>Nanning (service)</i>	<i>Guilin (tourism)</i>	<i>Liuzhou (agriculture)</i>	<i>Liuzhou prefecture (agriculture &amp; service)</i>	<i>Baise prefecture (industry &amp; training)</i>	<i>Hechi prefecture (industry)</i>
Percentage of Mobile people	33	17	11	8	7	4

Guangxi is a tourist destination. In 1998, Guangxi received 34.5 million domestic tourists and 523,300 overseas tourists. Over 72 per cent of them visited Guilin.

### *China-Viet Nam population movement*

Cross-border trade and travel between Guangxi and Viet Nam is increasing. There are 12 official border-crossing checkpoints along Guangxi's 1,300 kilometres long border with Viet Nam. The checkpoints at Tongzhong, Aidian, Pingxiang, Ping'er, Kejia, Shulong, Yuexu, Longbang and Pingmeng are for local cross-border trade and travel while the other three checkpoints at Dongxing, Friendship Pass and Shuikou allow large volumes of intercountry trade and travel. In 1999, over 2 million Chinese and nearly 2 million Vietnamese crossed the border through these 12 checkpoints. In 1999, only 5 per cent of the 2 million Chinese who visited Viet Nam were traders while 15 per cent of the 2 million Vietnamese who came to Guangxi were traders.

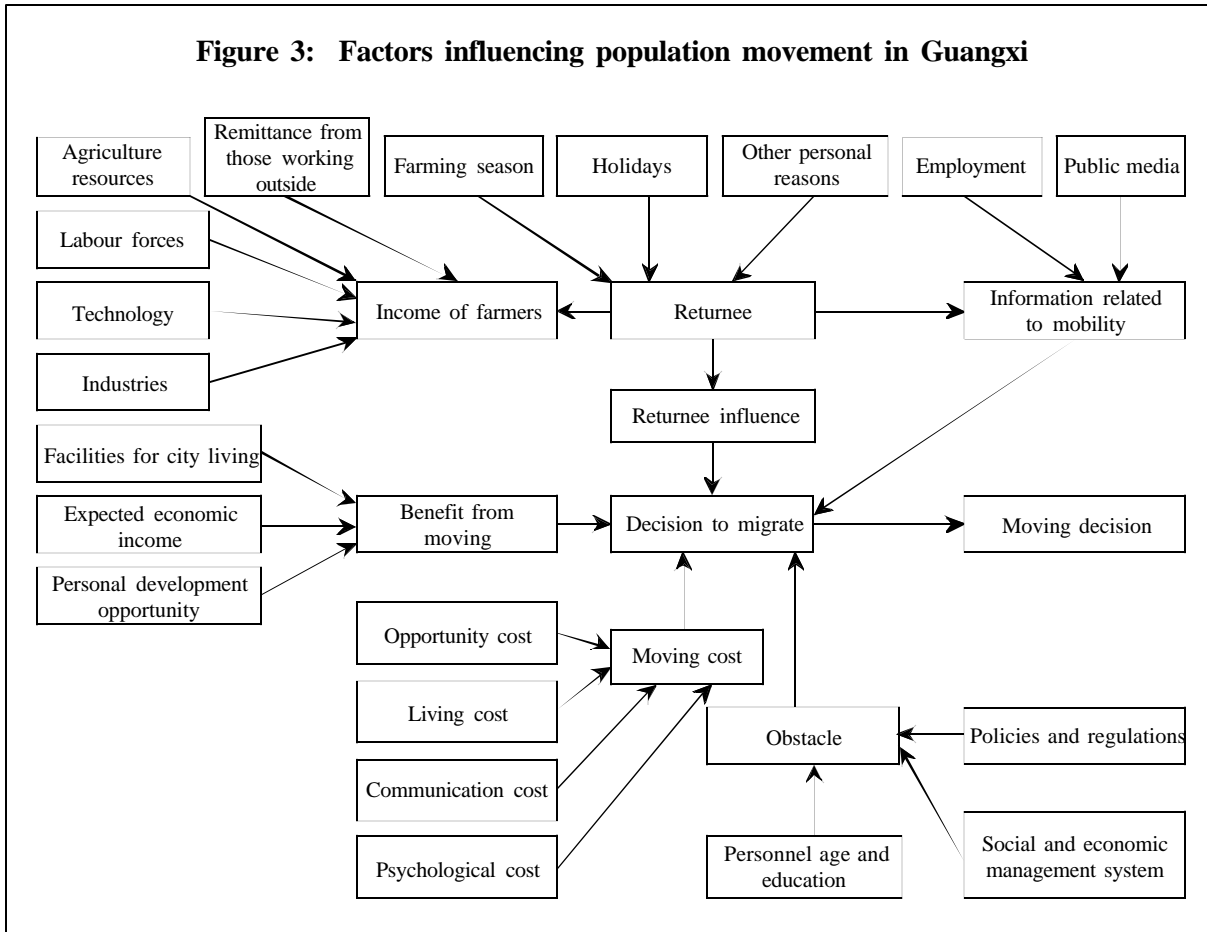
### **3. Factors Contributing to Population Movement**

- **Limited arable land:** Arable land is limited in Guangxi as 75 per cent of the area is mountainous and non-arable. Mountains and hills are high and steep, composed of 90 per cent rocks and 10 per cent arable soil, thus prone to drought, flood and a lack of surface water. This topography makes land use, agriculture and development difficult.
- **Increased pressure on arable land due to industrialization, urbanization and infrastructure projects:** For the last ten years, mega projects such as hydropower, economic development zones, industrial parks, highways and corresponding urbanization have further reduced land available for farming and resulted in over 4 million mobile labourers by 1997.

- ***Low returns from farming:*** The costs of agricultural inputs are increasing. Careless agricultural practices rendered the land less productive. As a result, agricultural activities have become relatively less profitable which has forced an increasing number of farmers to seek other forms of livelihood, often away from their home villages. Rural agriculture is unable to provide employment to the entire rural workforce. This forced the unemployed to seek alternative sources of income in the cities.
- ***Redundant workers due to the restructuring of public enterprises:*** In the past, surplus labourers were absorbed in various state and public enterprises resulting in reduced competitiveness. With changing times and needs, a large number of state workers lost their jobs under economic restructuring because state enterprises were no longer able to absorb the surplus labour.
- ***Emergence of technology drives industries and investments:*** new demands and investments were made in the manufacturing and high technology sectors. These industries need workers for their factories which attract labourers from rural areas.
- ***Socio-economic marginalization of the rural poor:*** The fruits of economic growth and development were unevenly distributed and did not quite reach the rural populace. Income disparities between the rural and urban areas widened further and rural unemployment increased. By 1997, people living under the official poverty level in the central and north-western parts of the province rose to 4.7 million, which is more than 10 per cent of the total population of Guangxi.
- ***The Guangdong factor:*** During the 1980's, given its central location, neighbouring Guangdong Province became one of the early special economic zones in coastal China thus creating an environment favourable to investment, attracting foreign capital and transforming it into a thriving economy. Its economic growth reached 19 per cent and 11 per cent during the Eighth and Ninth Five-Year Plans, respectively. To support its booming industries and economic growth, Guangdong urgently needs large number of workers. Because of its close proximity, easy access, similar language and surplus labour force, Guangxi became the largest supplier of workers to Guangdong.
- ***Pursuit of a dream:*** The glamour and allure of the city life as portrayed on television and as heard from returned workers has influenced young and unemployed villagers to move to urban centres.

#### **4. HIV Vulnerability Related to Population Mobility**

In host communities, the migrant workers face many difficulties with adaptation, acceptance and accessing services. They may become isolated, marginalized and vulnerable. Given their anonymity in the new environment, and without the social constraints of their home community, many migrant labourers between 18-40 years of age engage in risk behaviours including drug use and sexual promiscuity.



While in the host community, migrant workers have little or no access to services such as information, counselling and health care. According to official sources, there are approximately 600,000 registered migrant labourers who receive limited medical care from their employers. Another estimate states that 700,000 unregistered migrant labourers do not have medical benefits; only in emergencies do they seek care.

Many women leave their home communities looking for employment elsewhere and find themselves working in barbershops, hotels and entertainment establishments. Many of these businesses serve as fronts for sexual services and the women working for them are highly vulnerable to HIV.

### *Spring Festival*

It is a tradition for Chinese to return to their families every year during Spring Festival, resulting in a massive movement of people throughout China a month before and after the holiday. An estimated average of 4 million people either returned to or travelled through Guangxi during this period. Many of the returnees are ignorant about HIV prevention and/or their own HIV status. Their annual homecoming puts their partners in the villages at risk for STIs and HIV. This is one of the most important factors triggering local HIV epidemics.

### *HIV prevention for mobile populations*

It is difficult to reach undocumented populations with information and services. Registered mobile populations are only a fraction of the actual total number. Current HIV sentinel surveillance does not capture mobile populations. For the first time, the Guangxi provincial government's 1999-2010 HIV/AIDS strategy plan includes mobile populations.

The Guangxi provincial government is now setting up three-tiered employment service centres in its cities and towns. New recruits are processed through these centres. Taking advantage of existing administrative structure and management, Guangxi can organize HIV preventive education and awareness campaigns to reach mobile populations.

### *HIV/AIDS epidemic and surveillance activities in Guangxi*

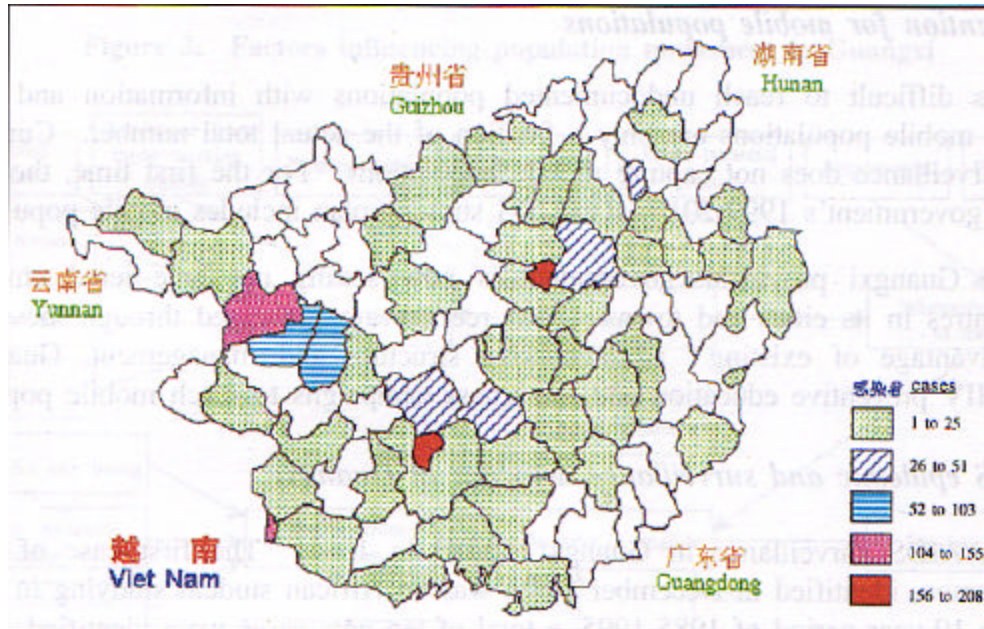
HIV/AIDS surveillance in Guangxi started in 1985. The first case of an HIV-infected person, identified in December 1989, was an African student studying in Guangxi. During the 10-year period of 1985-1995, a total of ten new cases were identified. In 1996, 44 HIV-positive cases were identified among drug users in Pingxiang on the border of Viet Nam; and paid blood donors from Wuming county and Guigang who travelled to other provinces to sell their blood. Those were the first recorded HIV cases among local residents in Guangxi. Since then, the number of HIV cases has increased rapidly. By September 2000, a total of 1,955 HIV-positive persons and nine AIDS cases (four have since died) have been reported from 51 out of 59 counties in Guangxi. See the Table 4 for details.

**Table 4: Number of HIV positive cases in Guangxi, 1989-2000**

<i>Year</i>	<i>Number of new HIV-positive cases</i>	<i>Number of AIDS cases</i>
1989-1995	1	–
1996	44	2 (1 died)
1997	195	2 (1 died)
1998	530	3* (1 died)
1999	535	2* (1 died)
2000 (Sept)	641	–
Total	1955	9 (4 died)

\* AIDS cases found in 1998 and 1999 were previously tested as HIV positives.

It is clear that early HIV infection (1989-1995) in Guangxi was low in numbers and limited to a small group of mobile people such as foreign traders, students, residents from other provinces and paid blood donors. In 1996, HIV infection was found among injecting drug users in Pingxiang. Since 1997, HIV infection rapidly moved to the general population. The number of new cases in 1999 was 174 per cent more than in 1997. Spatially, HIV infection rapidly spread from under five counties in 1996 to 51 counties by 2000. Most were found in cities along the Vietnamese border and in Baise prefecture, next to Yunnan province.



**Map 2: Distribution of HIV cases in Guangxi as of September 2000**

HIV sentinel surveillance in 1999 showed that HIV infection were found among drug users, sexually transmitted infection (STI) clinic patients and sex workers. HIV was also detected in pregnant women, voluntary blood donors, out-bound labourers and persons returning from abroad.

In Guangxi, the majority of HIV-infected persons are 20-40 years old, unmarried females with, on average, a junior high school education. The proportion of infected female-drug users in Guangxi is higher than in other provinces of China. Needle sharing for drug use is the major mode of transmission. Moreover many female drug users, including those who are HIV positive, also engage in sex work. This factor perpetuates the spread of HIV from the drug using population to the general. Sexual transmission has become a major HIV transmission mode in Guangxi. Given that the majority of HIV positive cases are young and unmarried females, Guangxi potentially will have an increased mother-to-child HIV transmission. The overall HIV prevalence is estimated at 25,000 cases in 1997 and is expected to reach 80,000 by 2005. Based on these estimates, the HIV epidemic in Guangxi is already serious and is likely to get worse with time.

### ***Populations vulnerable to HIV in Guangxi***

**Drug users:** There are an estimated 100,000 drug users in the province. Most are city dwellers. The number of drug users in rural areas is also increasing. They often cluster in groups to share drugs and syringes. Once HIV is introduced through needle sharing, it spreads rapidly among drug users. There are two international drug trafficking routes in Guangxi: (a) Viet Nam to Nanning via Pingxiang and Ningming then onward; (b) Yunnan to Nanning via Baise, Tianyang and Tiandong then onward.

Most drug users have less than a junior high school education. They are between 20-35 years of age, mostly unemployed or self-employed. Since drug use is illegal in

China, interaction between drug users and other population groups is infrequent. Society is still hostile towards drug users. As a consequence, drug users are marginalized in the society with little access to services.

**Commercial sex workers:** Because of its central location in southwest China, special political and economic status and resultant growth and development, Guangxi is a centre for trade and industry. It is also a transport hub and a transit point for southwest China, Guangdong province, Hong Kong, Macau and South East Asia. With a prosperous economy, international contact and tourism in coastal cities, prevailing attitudes towards sex have become more open and tolerant. Many women work in service trade along the border and in coastal cities. According to police statistics, there are approximately 50,000 commercial sex workers in Guangxi, working in three types of settings:

- big hotels, saunas, karaoke bars and other entertainment facilities.
- barber's shops as hairdressers or masseuses.
- roadside food stalls in rural-urban crossroads as waitresses and sex workers.

In addition, the number of mobile people has considerably increased in the cities. As a result, commercial sex work gained a strong foothold in Guangxi making sex one of the major modes of HIV transmission in the province. Most sex workers are brought to Guangxi by their spouses, friends and relatives under the pretext of lucrative jobs and income in the cities. More than 67 per cent of sex workers came from poor rural areas of other Chinese provinces. Some, however, are young urban girls between ages of 16-25, approximately 70-90 per cent are unmarried and 75 per cent have less than junior high school education. Almost all of their families are unaware of their work. Some return home every 3-12 months. Others send remittances without ever returning home. Society considers them socially unacceptable. Public opinion supports a government ban on sex work.

Most sex workers receive sporadic information on STIs and HIV/AIDS through newspapers, magazines, pimps, friends and peers. They seldom watch TV due to their work schedule. Others receive information from doctors. Many form clusters, based on place of origin, for group support and mutual help.

Only 14 per cent of the female sex workers consistently use condoms. The main reason for not using condoms is client's objection. Sometimes they mistakenly rationalize that since their partners are boyfriends or since they already use other contraceptives, condom use is unnecessary. They lack knowledge about hygiene and STIs and HIV/AIDS. Though the STIs incidence rate among these women is high, they do not usually seek timely treatment. Even when they seek medical treatment, they prefer private clinics.

**Long-distance truck drivers:** Guangxi, being a land transport hub and transit point, has many long-distance truck drivers. Most come to Yulin prefecture, especially Luchuan county and Beiliu. Approximately 80 per cent of the long-distance truck drivers are self-employed. Since they are highly mobile, it is difficult to have a coordinated and centralized management system for them. Over 45 per cent of the truck drivers are between 20-29 years of age. Sixty-three per cent completed junior high school, 63

per cent have HIV/AIDS knowledge and 47 per cent know condoms can help prevent STIs and HIV infection. Most are away from home 15-20 days per trip. Nine out of 10 drivers visited sex workers along roadside food stalls, barbershops and parking lots.

Prevalence for gonorrhoea is 13 per cent and syphilis is 0.7 per cent, whereas the prevalence among the general population are 6 per cent and 0.11 per cent, respectively. The truckers spread STI to their spouses and girlfriends. In addition, some drivers use drugs and share needles.

### ***HIV/AIDS policies, programmes and services***

In 1985 Guangxi initiated its first HIV programme. Since its initiation, the Guangxi government is monitoring the situation and implementing related policies, laws, administrative decrees and regulations in line with the central government. In 1991, a special high-level HIV/AIDS Committee was established for HIV prevention, control and coordination activities in Guangxi. The committee is composed of senior officials from 15 government departments and social bodies. The committee has promulgated regulations requiring local governments at all levels to incorporate HIV issues in their respective economic and social development plan, draw up annual workplan, set up special units and hire staff for HIV activities within their respective jurisdictions.

The Youth League, Women's Federation, Labour Union, Preventive Medical Association of China and Red Cross have members throughout the province for mass mobilization. The HIV/AIDS Committee plays a pivotal role in terms of policy, guidance, technical support, coordination, communication, training of key staff and fostering collaboration with many agencies for HIV/AIDS prevention, control and care services across Guangxi.

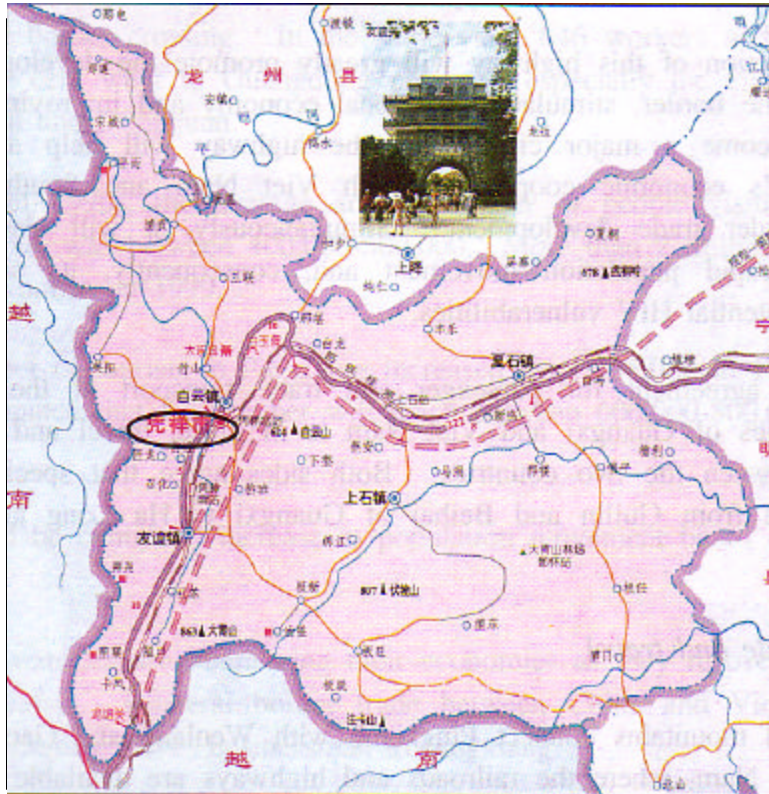
Instituting quality and compulsory education in rural areas will take at least one or possibly several generations. However, they are important preconditions to HIV/AIDS preventive education. Financial allocation for medical care should include rural areas. At present, medical services in cities, townships and rural areas are uneven. Medical care in many remote or mountainous areas is very poor thus making HIV/AIDS prevention and control difficult.

To access drug users, it is important to first gain their trust. Health education materials specifically designed for drug users and peer education are effective means of disseminating HIV/AIDS prevention information among drug users.

To reach commercial sex workers, one must gain the cooperation of security departments as well as, trust from owners of sex establishments, the service girls working within them and follow up on issues that are of concern to them. It is also important to show respect and keep confidentiality.

The parking lots and terminals for the truckers have become ideal places to reach long-distance drivers with various services and interventions. While waiting for cargo in parking lots, drivers often visit nearby recreational establishments to play snooker, relax or watch videos while others simply rest in the cab. Additionally, parking lot attendants are potential assistants for HIV prevention programmes and can be utilized to reach this population.

## II. PINGXIANG CITY



Map 3: Pingxiang

### *Introduction*

Pingxiang is a major urban centre and trading post on the border with Viet Nam. By the end of 1999, its total population reached 100,691 with a density of 154 person/kilometres. There are 17 ethnic nationalities with the Zhuang being the most populous.

### *Transport system*

By 1999, there was a network of 30 highways connecting all villages. Railways and highways exist throughout this region and Viet Nam. Pingxiang Railway follows the Hanoi-Pingxiang-Nanning-Beijing-Moscow rail route thus providing a land bridge connecting Eastern Europe and Southeast Asia. The Ping'er River in Pingxiang City, part of the Pearl River system, connects Viet Nam in the south and Nanning, Wuzhou and Guangzhou in the northeast.

The new 178 kilometres Nanning-Friendship Pass (Pingxiang) Highway is currently under construction. It will connect the Wuxu Airport of Nanning to the Number One

Highway of Viet Nam. Construction starts in 2001 and will be completed by 2004. Once completed, this new network will serve as the most convenient land route connecting China to Viet Nam and South East Asia. Its main line is 178 kilometres in length with 46 kilometres long branches.

The completion of this highway will greatly promote the development of natural resources along the border, stimulating the local economy and improving transportation. Nanning will become a major city where the highway will help alleviate poverty, strengthen China's economic cooperation with Viet Nam and South-East Asia and facilitate the border trade development. Simultaneously, it will also provide more convenient and rapid population movement and, consequently, its side-effects: drug trafficking and potential HIV vulnerabilities.

Once the agreement for passenger and trade transport at the border by the transport authorities of Guangxi and Viet Nam is in place, travel and communications will improve between the two countries. Both sides agree that special tourist routes will open to and from Guilin and Beihai of Guangxi to Ha Long and Quang Ninh, Viet Nam.

### ***Cross-border trade and travel***

Rivers and mountains connect Pingxiang with Wenlang and Gaolu of Lang Son Province in Viet Nam, where the railroads and highways are available for cross-border trade and transportation. Along the 97 kilometres long border, there are many Class I and II national ports, two large and multi-functional trade markets and many routes. Besides sharing similar languages and customs, the local people near the border also intermarry, leading to frequent cross-border visits and communication. According to 1999 statistics from the Municipal Foreign Affairs Office, Port Office and Frontier Inspection Station at Friendship Pass, approximately 2 million people crossed the border to visit family and friends. A recent increase in trans-border tourism has further stimulated population movement between both countries.

### ***Population mobility***

With its advantageous location, convenient transportation, preferential trade policies and tourism resources, Pingxiang has become an important trade centre, transport transit point and tourist destination. It attracts businessmen and tourists, both domestic and international. For example, in a given day, an average of 10,000 people from 20 provinces in China and Viet Nam pass through the border towns of Puzhai and Nongyao. Over 500 long-distance trucks drivers from both countries pass through the city daily. This massive movement and influx of businessmen, tourists and truckers further fuelled HIV epidemics in the border area.

Pingxiang was “opened to the outside” in 1992 for economic growth and trade. Since then, an inflow of population has increased in tandem with the increase in construction and border trade. In 1999, there were 25,762 passport holders requesting visas to visit Pingxiang. There were 148,348 applications for entry-exit permits for the China-Viet Nam border crossing. In the same year, 646 workers and businessmen left Guangxi, 90 per cent went to Guangdong province, especially the cities of Guangzhou, Shenzhen, Zhuhai and Dongguan.

Throughout 1990s, the average annual number of people visiting Pingxiang for business or tourism was between 400,000-500,000. More than 2 million people cross the China-Viet Nam border in 1999.

The number of tourists to Pingxiang increased from 305,000 in 1998 to 322,000 in 1999. It is estimated that the number will reach between 600,000-800,000 in the next 3 to 5 years.

There will be continued increase in population movement based on the following factors:

1. ASEAN countries are liberalizing their economies as they recover from the recent financial crisis. Bilateral border trade between China and Viet Nam will also increase bringing more businessmen to Pingxiang.
2. In 1999, China and Viet Nam signed an agreement on the land border, solving a long-term dispute over boundaries. Both sides agreed to increase bilateral border trade from US\$ 1.3 billion in 1999 to US\$ 2 billion in 2000. As a result, Pingxiang will become the preferred commercial centre due to its size, sound management and central location.
3. On 18 January 2000, the highway from Pingxiang to Lang Son in Viet Nam began operation, promoting cross-border movement of passenger and freight.
4. Since 2000, Pingxiang has made great efforts to promote tourism by constructing Puzhai Resort, Friendship Pass (Zhengnan Pass), Victory Memorial Park and Dalian City Park. Once completed, these developments will further accelerate tourism and trade in Pingxiang.
5. The Nanning-Friendship Pass, planned and funded by the state, began construction in 2001. Once completed, it will stimulate economic growth and development of Pingxiang.

### *HIV vulnerability*

Of the 1,000 kilometres border between China and Viet Nam, over 200 border-crossings are in Guangxi, creating easy access between the two countries. Large quantities of drugs from Viet Nam are smuggled into China at different points. Drug trafficking and drug use are common in both countries, creating a condition for HIV transmission. By 1999, more than 600 HIV cases were reported in Lang Son province of Viet Nam, mostly along the border of Pingxiang. In 1999, a total of 132 HIV cases were found in Pingxiang, among which 55 per cent were residents from border villages.

### *HIV surveillance activities*

HIV surveillance in Pingxiang began in 1994. The first HIV case was found among drug users in 1996.

**Table 5: Number of cases from 1996 to 1999**

<i>Year</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
HIV-positive cases	18	24	36	50

By the end of October 2000, there were a cumulative total of 154 HIV-infected persons distributed within urban areas, nearby villages and villages bordering Viet Nam. Of the infected persons, 55 per cent were farmers, 35 per cent unemployed and 10 per cent vendors. The male to female ratio was 12:1 with 98 per cent of the infected between ages 15 to 29.

**Table 6: Reported HIV cases**

<i>Year</i>	<i>Drug addicts</i>		<i>STD clinics</i>		<i>Sex workers and service staff</i>		<i>Long-distance truck drivers</i>		<i>Mother-infant surveillance (infant)</i>	
	<i># surveyed</i>	<i># positive</i>	<i># surveyed</i>	<i># positive</i>	<i># surveyed</i>	<i># positive</i>	<i># surveyed</i>	<i># positive</i>	<i># surveyed</i>	<i># positive</i>
1994	668	0	88	0	–	–	–	–	–	–
1995	–	–	1,366	0	–	–	–	–	–	–
1996	121	18	–	–	23	0	–	–	–	–
1997	148	25	464	0	840	0	85	0	–	–
1998	343	49	802	1	–	–	–	–	–	–
1999	564	61	1,091	3	–	–	–	–	628	0
<b>Total</b>	<b>1,844</b>	<b>153</b>	<b>3,811</b>	<b>4</b>	<b>863</b>	<b>0</b>	<b>85</b>	<b>0</b>	<b>628</b>	<b>0</b>

Most of the surveyed drug users are injection-drug users. The projection for the next 3 to 5 years is that once sexual transmission passes a certain threshold, mother-to-child transmission and transmission through blood supplies will be unavoidable. Sexual transmission will be the main transmission mode for HIV/AIDS, directly influencing Guangxi and other provinces.

### ***Pingxiang population and HIV vulnerability***

***Injection-drug users (IDUs):*** At the end of 1999, the number of drug users registered with the public security department of Pingxiang was 626, of which 82 per cent were IDUs with 88 per cent male. The average age is 25 and the youngest is only 12. Drug users spread throughout the city, surrounding villages and border areas between China and Viet Nam. Most are unemployed teenagers (61 per cent); semi-illiterate farmers (21 per cent); and workers/ vendors (18 per cent). The majority do not have a fixed income and tend to steal, gamble and have multiple sexual partners. Books, newspapers and television are not accessible to these populations thus limiting potential channels for HIV preventive messages to reach them. One way for information dissemination and education among IDUs is to include them in HIV sentinel surveillance. Their high-risk behaviour lies in sharing needles. An investigation of 48 drug users in Pingxiang showed 28 per cent congregate at playgrounds, isolated street corners and by the foothills to share injection paraphernalia. Though most recognize the dangers of needle sharing, they continue the practice despite knowledge of HIV transmission. The people in this group are discriminated against by society due to their drug dependence. Typically, drug users are marginalized, alienated and withdrawn from the society.

***Commercial sex workers:*** According to the Women's Health Centre of Pingxiang, Pingxiang has 400-450 women who engage in sex work. Of them, 98 per cent are from other provinces; 84 per cent are between ages 16-25 and 16 per cent are between ages 26-35. They frequent downtown areas and live in barbershops, massage parlours or hotels. They live in groups of three to five, are managed by a pimp, move frequently within a wide area and have close relations with their peers. They have few opportunities to read and watch TV. Similar to IDUs, the channels for information dissemination are limited. They have frequent sexual encounters with clients without taking any safe sex precautions. An investigation of over 200 sex workers in the year 2000 showed that 30 per cent to 40 per cent did not use condoms either due to ignorance or clients' preference.

***External mobile population:*** The external mobile population consists mainly of businessmen, tourists and long-distance truck drivers coming to Pingxiang from other provinces of China and Viet Nam. According to the tourist bureau, 300,000 national and international tourists visited Pingxiang in 1998 and 1999. Among them, 10,000 went to Viet Nam and 10,000 entered China at the border. About 1,000 long-distance truck drivers and their assistants pass through or stay in Pingxiang daily. The border trade, travel agencies, parking lots, railway stations, bus stations and border check points are all entry points and good channels for information dissemination. In 1997, a questionnaire administered to a random sample of over 85 long-distance truck drivers showed, while on the road, 100 per cent visited sex workers.

Potential impact of the HIV epidemic in Pingxiang and all of China depends on how effectively HIV prevention, care and support interventions are carried out.

**Youth:** There are about 48,000 young people aged 10 to 34 in Pingxiang. They are active in all social activities. Because of their curiosity, innocence and lack of self-control, they also exhibit high-risk behaviours, such as multiple sex partners and drug use. However, there are more opportunities to reach this group and more direct channels for information dissemination through work place, schools and the Communist Youth League. It is also easier to provide information to them through TV, newspapers, poster board notices, exhibitions and education brochures.

### ***Government and civil society in HIV/AIDS prevention***

The Pingxiang government's policy on HIV prevention and control is pragmatic. The government supports and encourages HIV preventive education and training. It encourages research projects on HIV prevention and control, and seeks an active collaboration with relevant sectors in Viet Nam for joint HIV prevention along border areas<sup>1</sup>.

Mass organizations (e.g. the Labour Union, the Communist Youth League, the Women's Federation and associations for overseas Chinese), have a proactive attitude towards HIV prevention and control. Their cooperation with the health sector in conducting relevant work shows their support. The Labour Union, the Youth League and Women's Federation all provide HIV education and training for their members.

Border trade, agriculture and tourism have all spurred the economy in Pingxiang. In 1999, the Gross Domestic Product (GDP) of Pingxiang was 898 million yuan<sup>2</sup>. The Pingxiang municipality invested 5.1 million yuan in the health sector, accounting for 6 per cent of its total financial expenditure. Of the health budget 200,000 yuan (4 per cent) was earmarked for STIs and HIV. Before 1999, there were no special funds for HIV prevention and control. In 2000, an HIV programme was listed in the general programmes for national economy and social development.

Pingxiang has established and staffed a health service network according to minimum requirements of the "Health for All" target. The Health and Anti-Epidemic Station, People's Hospital, Maternal and Child Health Centre and Traditional Chinese Medicine Hospital are located in Pingxiang.

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<sup>1</sup> Hsu, Lee-Nah, "Governance and HIV/AIDS", March 2000, UNDP South East Asia and Development Project, ISBN: 974-680-171-6

<sup>2</sup> One US Dollar is approximately eight yuan plus or minus currency exchange fluctuations.

Within the Health and Anti-Epidemic Station of Pingxiang, there is a service centre for STIs and HIV and a clinic for counselling and treatment. The Health and Anti-Epidemic Station, People's Hospital and Maternal and Child Health Centre in the city carry out various tests, including HIV screening. STI treatments are offered by every medical facility, including private clinics. The personnel in these facilities are professionally trained, have general knowledge of STI diagnosis and management and can provide counselling to HIV-infected persons and their families.

A Health Education Institute was established in the city. The Health and Anti-Epidemic Station opened a telephone hot line for counselling and set up a counselling clinic. In each township health centre and village clinic, an education board was set up for health education and display of relevant information.

Medication is a popular item in the border trade. Medical supplies in the 37 state-owned and private drugstores located in each city and township are adequate. Medicines for STIs, syringes and condoms are easily available in drugstores.

Currently health care is financed by a combination of the government, social and medical insurance programmes. This system is now in transition from a free medical care to medical insurance and fee for services system. The annual average per capita expenditure on medical treatment for rural populations is about 150 yuan.

Families and communities are culturally conditioned in a way that they fear HIV and discriminate against those affected by it. As such, the level and quality of family and community-based care services to HIV positive persons are inadequate. There is a need for increased education, awareness, and training pertaining to HIV.

The transport sector can also play a pivotal role for HIV/AIDS prevention by:

- adding HIV prevention into the training for drivers and road maintenance staff.
- setting up notice board in public areas for HIV preventive messages.
- distributing health education materials on HIV/AIDS prevention by cooperating with the health and anti-epidemic station departments.

As HIV prevalence increases, increasing population movement serves to “amplify” HIV spread when people continue high-risk behaviours such as unprotected sex with multiple partners and injection drug use.

It is thus imperative to strengthen communication and cooperation between China and Viet Nam for HIV prevention, AIDS care and support in the border areas.

### III. NINGMING COUNTY



Map 3: Ningming County

#### *Introduction*

Ningming is located 212 kilometres. southwest of Guangxi, bordering Viet Nam on the south, Pingxiang on the east and north of Chongzuo and Fushui Counties. It covers an area of 3,698 kilometres., has a total population of over 380,000 including minorities such as Zhuang, Yao and Miao with a population density of 91 people per square kilometre. Over 77 per cent are Zhuang ethnic minority.

The county is mountainous and poor. There are mountains in the southeast and hills in the northwest with basins, valleys and plains in the middle. The Zhuang, Han, Dong, Miao and Jing minorities are widely dispersed with limited transportation and economic opportunities. Ningming is rich in local products such as aniseed, sugarcane, rosin and tropical fruit. Rice and maize are the main agriculture products. Though the inhabitants of the border have traditionally intermarried through the centuries, the rate of

intermarriage has increased recently, particularly for Chinese men to marry Vietnamese women. There are three major trading depots between Ningming and Viet Nam attracting merchants from both sides of the border for trade and other business.

### ***Population mobility***

Number 322 National Highway passes through the county. Ningming connects to neighbouring Pingxiang by both railway and highways. Traditionally, inhabitants of the China and Viet Nam border areas are used to crossing the border to visit relatives and friends frequently. In accordance with the joint China-Viet Nam Regulations for Visiting Relatives and Friends by Border Inhabitants, border inhabitants can cross the border with their Border Resident Cards. Through central and provincial level negotiations, six new border crossing checkpoints opened recently and border crossing procedures have been simplified between Ningming and Viet Nam.

Zhilang is a small village of 20,000 people with a 10 kilometres long border where over 2,000 Vietnamese women have illegally entered China and married residents of Ningming. Many return to Viet Nam to visit relatives during Spring Festival.

### ***HIV vulnerability***

Rail and highways are two ways for trafficking drugs through Guangxi and the rest of China. Though there are 1,100 registered drug users in the county, the actual number is estimated at 3,000-4,000; 70 per cent are between 17-35 years and 50 per cent are IDUs. Many female drug users sell sex for drugs.

With the resumption of the border trade with Viet Nam, an increasing number of mobile businessmen have entered Ningming. One million people travelled between the urban, rural and coastal areas. Eighty to 90 per cent were young people, some were drug users, sex workers or clients. Relevant departments were hard pressed to manage this level and size of mobility.

### ***HIV epidemic and surveillance activities***

HIV surveillance began in Ningming in 1997 with 53 drug users tested and all were HIV negative. In 1998, 2 per cent of drug users and 0.03 per cent of the blood donors were found to be HIV positive. By 1999, HIV infection reached 21 per cent among drug users confirming a fast growing HIV epidemic.

HIV serological surveillance has been limited in Ningming. It is critical to alert the local government of the emerging epidemic, to motivate society to undertake preventive actions to increase public awareness of HIV. Meanwhile, it is also necessary to conduct peer education among people with high-risk behaviours such as multiple sexual partners without condom use or sharing injecting equipment for drug use.

## IV. YULIN CITY

### *Introduction*

Yulin is seated in a hilly basin southeast of Guangxi with a total area of 12,838 kilometres<sup>2</sup>. Facing the sea in the south, Yulin has a typical tropical monsoon climate and mild weather. There are seven villages and eight towns within its jurisdiction. The population of Yulin is 5.5 million, 89 per cent rural and the remaining 600,000 are urban, of which 63 per cent live in Yulin. The city is also a large hometown for over 800,000 overseas Chinese, mostly from South East Asia, accounting for 20 per cent of the overseas Chinese in Guangxi. This makes Yulin the largest area for overseas communication and travel in Guangxi.

### *Transport*

Located in the centre of five cities (Nanning, Liuzhou, Wuzhou, Zhanjiang and Beihai), Yulin acts as the transport hub and a major distribution and transit centre for goods and visitors to southeast Guangxi. Backed by an elaborate land transport network, its seaport carries the largest volume of commodity traded in southeast China. Since the Bridge and Road Economy Strategy was launched in 1990's, transportation and communication in Yulin developed quickly. Its railway connects Yunnan and Guizhou provinces in the northwest, Beijing in the north and Guangzhou via Zhanjiang in the southeast.

The Number 324 National Highway passes through Rongxian, Beiliu, Yuzhou and Xingye Counties and Yulin City. Every village is now accessible by a network of 3,003 kilometres of highways. Connected mainly by highways to Yulin City as its centre, "The Half-an-Hour Economic Ring" was formed. It was aptly named because the four counties and an economic zone were accessible within half an hour drive.



Map 4. Yulin map

Yulin, known as the “Centre of the South” in China for its commodity trade centres, is the most advanced economic area in Guangxi. There are 249 markets in the city, including 41 special wholesale markets with an annual business volume of over 100 million yuan.

### ***Population mobility***

With improved economy and well-developed highways, private transportation in Yulin prospered. Private sector transportation handles 70 per cent of the passenger volume and 80 per cent of the goods. Yulin established a transport hub for national and private enterprises and all modes of transportation such as carts, tricycles, tractors and automobiles. As a result, there is a large number of long-distance truck drivers passing through Yulin.

The industrial structure markedly changed from 1990 to 1999. Industry and construction accounted for most of the Gross Domestic Product, while agricultural outputs was only a fraction of it. Farming systems have modernized to the point that there are now surplus farm labourers and more people with less land. More than 400,000 labourers migrated outward, mainly to Guangdong province. Employment services placed 16,286 surplus workers into various professions around Guangxi; 21,270 to other provinces, mostly to Guangdong province, and 9,400 workers to the Special Economic Zones.

The number of labour exports is increasing. Eighty per cent are less than 35 years old, 85 per cent are junior high school graduates with average salaries of 300 yuan per month, twice that of local farmers. The highest incomes are 1,070 yuan, and the lowest are 200 yuan per month.

In some villages most of the young have left, leaving behind the elderly and children. For most unemployed, moving out from the villages has become the main possibility for becoming employed and getting rich.

Before 1980, farmers, workers, cadres and intellectuals were part of the main social strata in Yulin. This changed after August 1981 when urban economic reforms were instituted and families became responsible for what they produced. As a result, new social groups emerged, such as industrialists, businessmen, private entrepreneurs and migrant workers.

Former farmers were integrated into the labour force under the new economy in the following roles:

- Cadres, managers of economic organizations and intellectuals of the villages.
- Workers in township enterprises including collective enterprises, joint family and private sector enterprises.
- Exported labourers.

### ***HIV vulnerability***

According to the Statistics Bureau of Yulin, 2 per cent of the rural population left for work outside of Yulin. The rural population is 4.9 million (89 per cent of the total), of which 118,000 (2.4 per cent) left in 1997 and 400,000 (8 per cent) left in 1999 to economically more advanced areas such as the cities of Shunde, Foshan, Jiangmen, Zhongshan, Dongguan and Zhuhai in Guangdong province. According to the police department in 1999, the transient population was 25,748, including 10,426 from other provinces. There were 11,029 females (43 per cent.) Nearly 42 per cent of the women worked in the service industry. Because the transient population tends to concentrate in cities and towns, the mobile population, accounting for over 11 per cent of the total population of Yulin, is more than 640,000.

There are 10 special markets such as medicine and clothing in Yulin; with more than 100,000 business people involved in daily transactions; 70 per cent of them were from provinces neighbouring Guangxi. Frequent large volume of population movement have resulted in booming sex work and serious drug-use problems. The situation has accelerated the transmission of HIV.

In 1997, there were 9,553 trucks with an average load capacity of five tons per truck in Yulin and about 20,000 long distance truck drivers. Nearly 90 per cent of long-distance truck drivers and their assistants have unprotected sex with multiple partners and/or commercial sex workers.

There are many women working in entertainment facilities who engage in sex work. Over 1,300 registered barber shops in the city are located on busy streets that employ at least three young women each, a total of nearly 4,000 workers. Haircuts are not profitable enough to meet the mounting monthly rent, so additional services are needed such as massage and commercial sex. Sexual services in barbershops, saunas and hotels increase rates of STI and HIV transmission.

### ***HIV epidemic and surveillance activities***

In recent years, HIV infection in Yulin has become a more serious problem. STI infections in Yulin rate the third highest among all infections there. Of the people with STIs, most are married. STI cases have spread to all levels of society with an increasing number of spousal-infections. Unfortunately, HIV prevention is only just beginning in Yulin.

Police records show that the number of drug users in Yulin is on the rise. The trend has shifted from inhaling drug use to injection drug use, which results in increasing HIV vulnerability. The exact number of drug users is difficult to estimate because those arrested by the police are only a fraction of the total.

## V. CONCLUSION

Guangxi has witnessed unprecedented socio-economic reform and change in the past 22 years. At the same time, it has experienced increased disparities between the rural and urban areas; large scale rural to urban population movement seeking work and the resultant increase in the floating population of major cities and along the special economic zones. It has seen a re-emergence of previously eradicated drug use, sex work, STIs and the emergence of HIV.

While the actual prevalence of HIV is low relative to the size of population, its pattern of spread and increase is of considerable concern. From the initial imported cases to residents in late 1980s, the infection has spread to injecting drug-users, blood donors and commercial sex workers. Here the infection has taken strong hold and is moving into the general population. The epidemic has moved from a few localized areas, bordering Yunnan and Viet Nam, to most of Guangxi. Most drug users and sex workers practice high-risk behaviour and are without access to services.

Other mobile population groups such as long distance truck drivers and traders, including their partners in source communities, are now in situations that make them more vulnerable to HIV infection.

When socio-demographic and spatial characteristics of HIV positive populations are analysed in the context of Guangxi, a link between HIV and population movement emerges.

By 2000, Guangxi had a reported cumulative total of 1,955 HIV positive cases compared with a national total of 20,711 reported cases. The potential for the further spread of HIV infections could result in a major explosion of the epidemic.

The government in Guangxi is concerned about this looming epidemic. To date, the government has implemented a range of measures for the prevention and control of HIV/AIDS. However, further and vigorous response to this threat to the health, economy and security of Guangxi is needed. In particular, integrated, multi-level, multisectoral and targeted interventions are needed to minimize the emergent threat by HIV/AIDS.